carbipenems and fluorinated quinolones need clinical validation; however, in vitro susceptibility profile appears promising.

Divergent transcription of the *glpTQ* operons between type b and nontypeable *Haemophilus influenzae*

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In eubacteria *Escherichia coli* and *Bacillus subtilis*, the *glpTQ* operon is involved in utilization of glycerol-3-phosphate (G3P) as a carbon source, and the *glpT* and *glpQ* genes transcribe as a single unit. In *Haemophilus influenzae*, we have previously characterized the *glpT* and *glpQ* homologues encoding glycerol-3-phosphate permease and glycerophosphodiester phosphodiesterase, respectively. The protein encoded by *glpQ* is also called Protein D and is involved in pathogenesis. In this study, we analysed the *glpTQ* transcripts in one *H. influenzae* type b (Hib) and one nontypeable (NTHi) strain, and characterized potential function of the 1.4 kb *glpTQ* intergenic region that exists in most Hib strains but not in NTHi strains. In Northern blot and RT-PCR analysis, the *glpT* and *glpQ* genes in the Hib strain transcribed separately, whereas a co-transcribed *glpTQ* was found in the NTHi strain. It suggests that the 1.4 kb *glpTQ* intergenic region in Hib strains partially blocks the *glpTQ* operon transcription. When an isogenic mutant strain where the 1.4 kb region was replaced with a kanamycin cassette in the chromosome of the wild-type strain was tested, the blockage of the *glpTQ* transcription disappeared. We therefore conclude that due to the existence of the 1.4 kb *glpTQ* intergenic region in Hib strains, the *glpTQ* operons between Hib and NTHi strains transcribed differently. Based on a much lower G+C content (26 %) of the 1.4 kb DNA coding region than an overall G+C content of 38 % for the *H. influenzae* genome, we speculate that the 1.4 kb region might have been acquired by lateral transfer from an organism with a lower G+C content.

Catheter-related bloodstream infections (CRBSI) in the immunocompromised host treated by intra-luminal lock-technique (IL)

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Background: The aim of this open, uncontrolled study was to evaluate the reliability of IL for the treatment of microbiologically proven, uncomplicated CRBSI, in different categories of immunocompromised patients.
Methods: IL is based on a daily intraluminal instillation of a pre-definite highly concentrated solution of antimicrobials into the colonized line, locked within the line for at least 12 hrs/day Then the solution is removed and the CVC eventually re-used. In our study locks were repeated along 14 days. Vancomycin or teicoplanin 20 mg/ml were delivered for empirical locks, or in the presence of staphylococci, enterococci, micrococci and corynebacteria; amikacin 10 mg/ml or ciprofloxacin 2 mg/ml for susceptible Gram-negative bacteria; tailored antimicrobials for Gram-negative with different patterns of chemosensitivity. Fungal CRBSI were excluded. 23 patients, who had signs and symptoms of uncomplicated CRBSI, according to defined criteria, with AIDS (14) or haematological neoplasias (9), and carrying long-term central venous catheter (CVC) (tunnelled or totally implantable), were consecutively enrolled. Per protocol, they were all given locks plus systemic antimicrobial therapy during the first 48 hrs. After this time, once microbiological diagnosis had been proven, clinical reassessment was performed. If defervescence of fever occurred, the patient continued receiving IL alone or in combination with systemic therapy (same antimicrobials used for locks), according to the clinician's decision.
Results: Twelve underwent locks alone and 11 locks plus systemic therapy thereafter. 21/23 pts (91.3%) were cleared from infection and retained the line in place: 12/12 in the IL arm and 9/11 in the IL plus systemic therapy arm, as of clinical and microbiological follow-up performed at 14 days after the completion of treatment. The only two failures occurred in the combined treatment arm and were due to polymicrobial infections (methicillin-resistant *Staphylococcus aureus* plus Gram-negative bacteria), treated with glycopeptide alone-based locks.
Conclusions: This study, though limited, confirms that IL is an effective treatment option also for immunocompromised patients. Furthermore IL alone seems to be at least as effective as IL plus systemic therapy in the treatment of uncomplicated CRBSI, for the high antimicrobial concentrations obtained directly within the site of infection; but it results also in negligible blood antimicrobial concentrations, thus limiting the risk of dose-dependent side-effects and making it appealing in pts with liver or renal impairment as well.

Trends in spectrum and susceptibility patterns of pathogens causing bacteremia in pediatric febrile neutropenic oncologic patients (1998–2002)

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Background: Prospective surveillance of resistant bacterial pathogens is an indispensable tool of quality control in pediatric oncology departments.